

BLAST Basic Local Alignment Search Tool

Job Title: Nucleotide sequence (1713 letters)

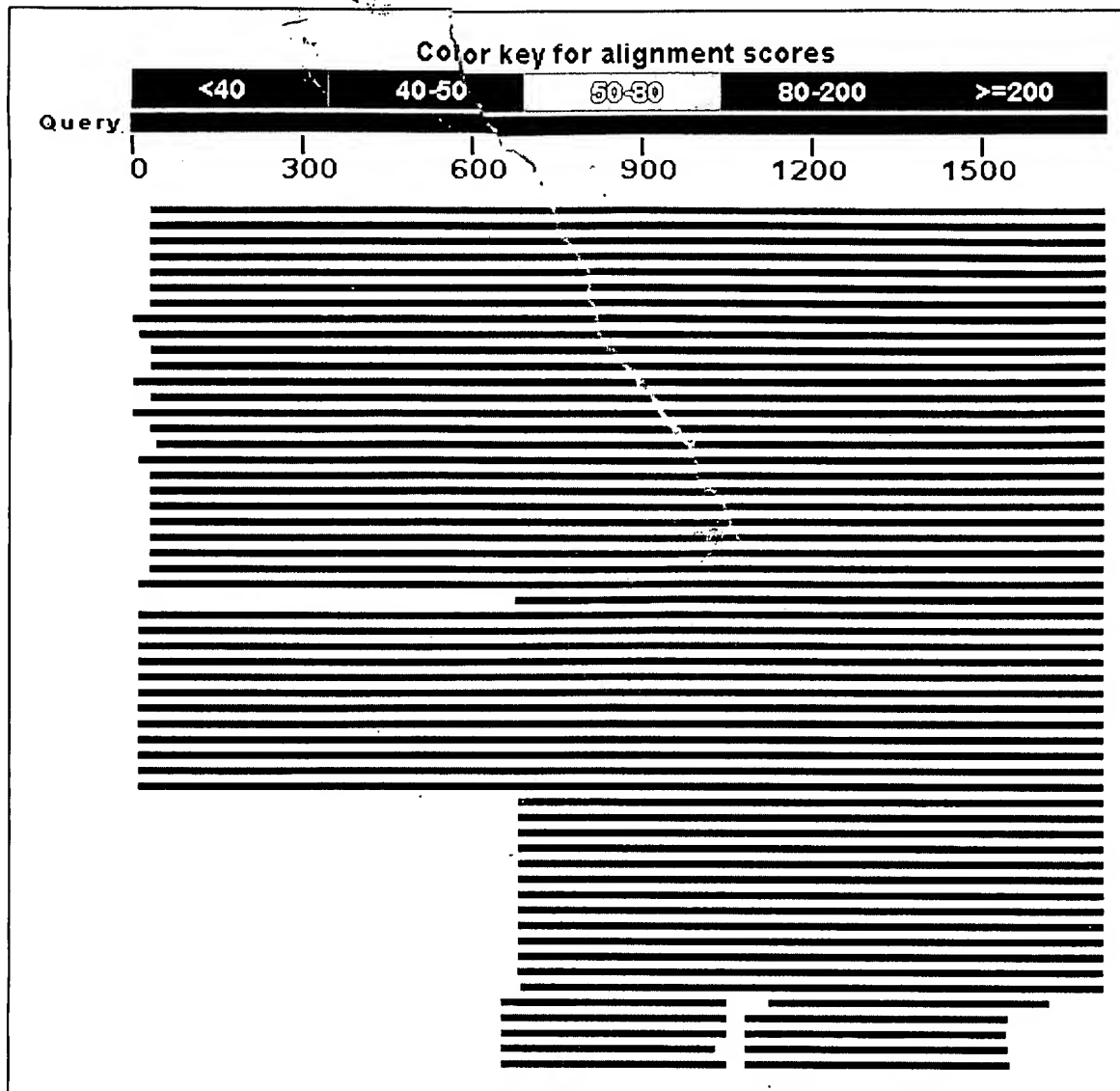
32

BLASTN 2.2.17 (Aug-26-2007)

RID: HT584ZYV012 Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences) 6,012,929 sequences; 22,005,976,730 total letters

Query= Length=1713

SEQ ID NO: 6

Distribution of 100 Blast Hits on the Query Sequence

Distance tree of results ^{NEW}

Legend for links to other resources: **U** UniGene **E** GEO **G** Gene **S** Structure **M** Map Viewer

Sequences producing significant alignments:

(Click headers to sort columns)

AY973860.1	Hepatitis C virus isolate cs2a-4 polyprotein gene, NS5B RNA dependent RNA polymerase region, partial cds	3092	3092	97%	0.0	99%
AY973859.1	Hepatitis C virus isolate cs2a-1 polyprotein gene, NS5B RNA dependent RNA polymerase region, partial cds	3075	3075	97%	0.0	99%
AF177036.1	Hepatitis C virus subtype 2a strain HC-J6CH clone pJ6CF, complete genome	3075	3075	97%	0.0	99%
AY973858.1	Hepatitis C virus isolate 2a-con polyprotein gene, NS5B RNA dependent RNA polymerase region, partial cds	3014	3014	97%	0.0	99%
D00944.1	Hepatitis C virus genomic RNA for polyprotein, complete cds	2737	2737	97%	0.0	96%
AB047641.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-2	2643	2643	97%	0.0	95%
AB047645.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-6	2549	2549	97%	0.0	94%
AF238483.1	Hepatitis C virus subtype 2a strain MD2a-4, complete genome	2523	2523	99%	0.0	93%
AY746460.1	Hepatitis C virus genotype 2a polyprotein gene, complete cds	2499	2499	98%	0.0	93%
AF238484.1	Hepatitis C virus subtype 2a strain MD2a-5, complete genome	2494	2494	97%	0.0	93%
AF169003.1	Hepatitis C virus subtype 2a isolate G2aK1, complete genome	2490	2490	97%	0.0	93%
AB047640.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-1	2488	2488	99%	0.0	92%
AF238482.1	Hepatitis C virus subtype 2a strain MD2a-2, complete genome	2477	2477	97%	0.0	93%
AF169005.1	Hepatitis C virus subtype 2a isolate NDM59, complete genome	2475	2475	99%	0.0	92%
AF238481.1	Hepatitis C virus subtype 2a strain MD2a-1, complete genome	2471	2471	97%	0.0	93%
AF169002.1	Hepatitis C virus subtype 2a isolate NDM228, complete genome	2470	2470	97%	0.0	93%
AF238485.1	Hepatitis C virus subtype 2a strain MD2a-7, complete genome	2455	2455	98%	0.0	92%
AB047644.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-5	2444	2444	97%	0.0	92%
AF169004.1	Hepatitis C virus subtype 2a isolate G2aK3, complete genome	2440	2440	97%	0.0	92%
AB047642.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-3	2438	2438	97%	0.0	92%
AB047643.1	Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-4	2383	2383	97%	0.0	92%
AB237837.1	Hepatitis C virus full-length replicon pFGR-JFH1 RNA, complete sequence	2344	2344	97%	0.0	91%
AB047639.1	Hepatitis C virus (isolate JFH-1) genomic RNA, complete genome	2344	2344	97%	0.0	91%
AB114136.1		2344	2344	97%	0.0	91%

Hepatitis C virus replicon pSGR-JFH1 gene for
neomycin resistance gene product, hepatitis C virus
nonstructural protein, complete cds

AB031663.1	Hepatitis C virus (isolate VAT96) genomic RNA, complete genome	1596	1596	98%	0.0	83%
D10076.1	Hepatitis C virus (HCV) genomic RNA, 3'-terminal part of NS5 region	1570	1570	60%	0.0	94%
D50409.1	Hepatitis C virus (isolate BEBE1) genomic RNA, complete genome	1563	1563	98%	0.0	83%
DQ155561.1	Hepatitis C virus (isolate D54) polyprotein gene, partial cds	1539	1539	98%	0.0	83%
AY232731.1	Hepatitis C virus clone MD2b1-2 polyprotein mRNA, complete cds	1491	1491	98%	0.0	82%
AY232730.1	Hepatitis C virus clone MD2b1-1 polyprotein mRNA, complete cds	1480	1480	98%	0.0	82%
AY232743.1	Hepatitis C virus clone MD2b7-2 polyprotein mRNA, complete cds	1447	1447	98%	0.0	82%
AY232742.1	Hepatitis C virus clone MD2b7-1 polyprotein mRNA, complete cds	1447	1447	98%	0.0	82%
AY232738.1	Hepatitis C virus clone MD2b5-1 polyprotein mRNA, complete cds	1413	1413	98%	0.0	81%
AY232735.1	Hepatitis C virus clone MD2b3-2 polyprotein mRNA, complete cds	1408	1408	98%	0.0	81%
D10988.1	Hepatitis C virus genome	1402	1402	98%	0.0	81%
AY232739.1	Hepatitis C virus clone MD2b5-2 polyprotein mRNA, complete cds	1397	1397	98%	0.0	81%
AY232737.1	Hepatitis C virus clone MD2b4-2 polyprotein mRNA, complete cds	1397	1397	98%	0.0	81%
AY232734.1	Hepatitis C virus clone MD2b3-1 polyprotein mRNA, complete cds	1363	1363	98%	0.0	81%
D49776.1	Hepatitis C virus isolate JK128 gene for NS5, partial cds	1075	1075	60%	0.0	85%
D86529.1	Hepatitis C virus gene for polyprotein (NS5 region), partial cds and 3'UTR, isolate: BA045	1059	1059	60%	0.0	85%
D49777.1	Hepatitis C virus isolate JK139 gene for NS5, partial cds	1048	1048	60%	0.0	85%
D84398.1	Hepatitis C virus gene for polyprotein (NS5 region), partial cds, isolate:UD254	1042	1042	60%	0.0	85%
D86532.1	Hepatitis C virus gene for polyprotein (NS5 region), partial cds and 3'UTR, isolate: RU169	1037	1037	60%	0.0	85%
D49769.1	Hepatitis C virus isolate JK081 gene for NS5, partial cds	1037	1037	60%	0.0	85%
D49775.1	Hepatitis C virus isolate JK117 gene for NS5, partial cds	1026	1026	60%	0.0	84%
D49780.1	Hepatitis C virus isolate JK151 gene for NS5, partial cds	1014	1014	60%	0.0	84%
D49761.1	Hepatitis C virus isolate JK025 gene for NS5, partial cds	1014	1014	60%	0.0	84%
D49772.1	Hepatitis C virus isolate JK109 gene for NS5, partial cds	1009	1009	60%	0.0	84%
D49760.1	Hepatitis C virus isolate JK020 gene for NS5, partial cds	1009	1009	60%	0.0	84%
D49778.1	Hepatitis C virus isolate JK143 gene for NS5, partial cds	1003	1003	60%	0.0	84%
D86530.1	Hepatitis C virus gene for polyprotein (NS5 region), partial cds and 3'UTR, isolate: BA047	948	948	59%	0.0	83%

AB284202.1	Hepatitis C virus subtype 6a gene for polyprotein (NS5B region), partial cds, isolate: TV137	741	741	28%	0.0	93%
AB281370.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT368	702	702	26%	0.0	94%
AB281423.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT538	686	686	26%	0.0	93%
AB281394.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT449	686	686	26%	0.0	93%
AB281369.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT130	680	680	27%	0.0	93%
AB281376.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT399	675	675	27%	0.0	92%
AB284218.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: TV158	671	671	26%	0.0	92%
AB284192.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: TV124	669	669	26%	0.0	93%
AB281402.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT475	664	664	27%	0.0	92%
AB284203.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: TV138	662	662	25%	0.0	93%
AB281410.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT503	658	658	26%	0.0	92%
DQ238634.1	Hepatitis C virus isolate DON11 NS5B protein (NS5B) gene, partial cds	652	652	23%	0.0	95%
U14293.1	Hepatitis C virus 2a K33 RNA polymerase (ns5) gene, partial cds	649	649	24%	0.0	94%
AB281407.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT496	643	643	27%	0.0	91%
U14294.1	Hepatitis C virus 2a K43 RNA polymerase (ns5) gene, partial cds	643	643	24%	0.0	94%
AB281381.1	Hepatitis C virus gene for polyprotein (NS5B region), partial cds, isolate: VT420	636	636	27%	1e-178	91%
DQ238705.1	Hepatitis C virus isolate DON97 NS5B protein (NS5B) gene, partial cds	636	636	23%	1e-178	94%
AB284228.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: TV106	614	614	24%	5e-172	92%
AB284249.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: VT550	588	588	23%	3e-164	93%
AY004015.1	Hepatitis C virus isolate IDU189 clone II non-structural protein 5b gene, partial cds	580	580	23%	5e-162	92%
AY004016.1	Hepatitis C virus isolate IDU189 clone III non-structural protein 5b gene, partial cds	575	575	23%	2e-160	92%
AY004014.1	Hepatitis C virus isolate IDU189 clone I non-structural protein 5b gene, partial cds	575	575	23%	2e-160	92%
AY834959.1	Hepatitis C virus isolate gb32 NS5b protein gene, partial cds	573	573	21%	8e-160	93%
U14288.1	Hepatitis C virus 2a I27 RNA polymerase (ns5) gene, partial cds	571	571	24%	3e-159	91%
AY004017.1	Hepatitis C virus isolate IDU189 clone IV non-structural protein 5b gene, partial cds	569	569	23%	1e-158	92%
AY834970.1	Hepatitis C virus isolate bj1 NS5b protein gene, partial cds	569	569	21%	1e-158	93%
AY834955.1	Hepatitis C virus isolate bj165 NS5b protein gene, partial cds	568	568	21%	4e-158	93%
DQ220940.1	Hepatitis C virus isolate G2MP031 NS5B (NS5B) gene, partial cds	566	566	22%	1e-157	92%

D28848.1	Hepatitis C virus RNA for NS5, partial sequence	566	566	21%	1e-157	94%
AY834956.1	Hepatitis C virus isolate bj779 NS5b protein gene, partial cds	564	564	21%	5e-157	93%
AY834957.1	Hepatitis C virus isolate bj665 NS5b protein gene, partial cds	562	562	21%	2e-156	93%
AY834969.1	Hepatitis C virus isolate sz450 NS5b protein gene, partial cds	558	558	21%	2e-155	93%
DQ220938.1	Hepatitis C virus isolate G2MP043 NS5B (NS5B) gene, partial cds	549	549	22%	1e-152	91%
AB284240.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: VT96	547	547	27%	5e-152	87%
AY834958.1	Hepatitis C virus isolate bj688 NS5b protein gene, partial cds	547	547	21%	5e-152	92%
AY834967.1	Hepatitis C virus isolate gz2 NS5b protein gene, partial cds	545	545	21%	2e-151	92%
AB284236.1	Hepatitis C virus subtype 2a gene for polyprotein (NS5B region), partial cds, isolate: VT909	544	544	21%	6e-151	93%
AY834968.1	Hepatitis C virus isolate km49 NS5b protein gene, partial cds	540	540	21%	8e-150	92%
DQ220931.1	Hepatitis C virus isolate G2MP034 NS5B (NS5B) gene, partial cds	536	536	22%	1e-148	91%
AY834965.1	Hepatitis C virus isolate zz12 NS5b protein gene, partial cds	536	536	21%	1e-148	91%
AY834961.1	Hepatitis C virus isolate sy7 NS5b protein gene, partial cds	536	536	21%	1e-148	92%
DQ220939.1	Hepatitis C virus isolate G2MP040 NS5B (NS5B) gene, partial cds	531	531	22%	5e-147	91%
DQ220926.1	Hepatitis C virus isolate G2MP029 NS5B (NS5B) gene, partial cds	531	531	22%	5e-147	91%
AY834964.1	Hepatitis C virus isolate bj675 NS5b protein gene, partial cds	531	531	21%	5e-147	92%
AY834960.1	Hepatitis C virus isolate zz4 NS5b protein gene, partial cds	531	531	21%	5e-147	92%
DQ220937.1	Hepatitis C virus isolate G2MP038 NS5B (NS5B) gene, partial cds	529	529	22%	2e-146	89%
D14190.1	Hepatitis C virus gene for NS5, partial cds, isolate SR103	529	529	19%	2e-146	94%
AY834963.1	Hepatitis C virus isolate km46 NS5b protein gene, partial cds	527	527	21%	6e-146	91%
AY834971.1	Hepatitis C virus isolate gz6 NS5b protein gene, partial cds	525	525	21%	2e-145	91%

Alignments

>gb|AY973860.1| Hepatitis C virus isolate cs2a-4 polyprotein gene, NS5B RNA dependent
RNA polymerase region, partial cds
Length=1770

Score = 3092 bits (1674), Expect = 0.0
Identities = 1676/1677 (99%), Gaps = 0/1677 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	28	.....	87
Query	97	CGATATCACAAACAAGGTGTACTGTACCACAACAAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	88	.....	147
Query	157	GTAAC TTTGATAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	148	.....	207
Query	217	AAGCTAGCGGCCTCCAAGGTCAACGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	208	.....	267
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	268	.....	327
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	328	.....	387
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCCAACCAAG	456
Sbjct	388	.....	447
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	448	.....	507
Query	517	AAGATGGCCCTTTATGACATTACACAAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	508	.....	567
Query	577	GGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	568	.....	627
Query	637	AAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	628	.....	687
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCGAGGAGGCCACACT	756
Sbjct	688	.....	747
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	748	.....	807
Query	817	CAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGTGCTCACCCTAGCATGGGGAAC	876
Sbjct	808	.....	867
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	868	.....	927
Query	937	ACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	928	.....	987
Query	997	GACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCCCTCTGGT	1056
Sbjct	988	.....	1047
Query	1057	GACccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTCT	1116
Sbjct	1048	.....	1107
Query	1117	GTGGCGCTGGGGCCACAAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCCA	1176
Sbjct	1108	.....	1167
Query	1177	ATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAAC	1236
Sbjct	1168	.....	1227
Query	1237	ATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCTCC	1296
Sbjct	1228	.....	1287
Query	1297	ATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGTG	1356

Sbjct	1288	.....	1347
Query	1357	TACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGCT	1416
Sbjct	1348	.....	1407
Query	1417	TTTTCTCTGCACACATACTCCCCACGAACTGACACGGGTGGCTTCAGCCCTCAGAAAA	1476
Sbjct	1408	.....	1467
Query	1477	CTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTC	1536
Sbjct	1468	.....	1527
Query	1537	ATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTTCGATATCTCTTCAACTGGGCGGTGAAG	1596
Sbjct	1528	.....	1587
Query	1597	ACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGCGCCTCCTGGATTTATCCAGCTGGTTC	1656
Sbjct	1588	.....	1647
Query	1657	ACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	1648	.....C...	1704

>gb|AY973859.1| Hepatitis C virus isolate cs2a-1 polyprotein gene, NS5B RNA dependent RNA polymerase region, partial cds
Length=1761

Score = 3075 bits (1665), Expect = 0.0
Identities = 1673/1677 (99%), Gaps = 0/1677 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	19	.....	78
Query	97	CGATATCACAAACAAGGTGTACTGTACCACAACAAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	79	.....C.....	138
Query	157	GTAACCTTTTGATAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	139	.....	198
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	199	.....	258
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	259	.....	318
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	319	.....	378
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCACCAAG	456
Sbjct	379	.....	438
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	439	.....G.....	498
Query	517	AAGATGGCCCTTTATGACATTACACAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	499	.....	558
Query	577	GGATTCCAGTATTCCTCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	559	.....	618
Query	637	AAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	619	.....	678
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCGAGGAGGCCACACT	756
Sbjct	679	.....	738
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	739	798
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Sbjct	799	858
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	859	.....	918
Query	937	ACAATGCTGGTATGCGGCGATGACTTGGTTGTCTCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	919	.....	978
Query	997	GACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCCTCCTGGT	1056
Sbjct	979	.....	1038
Query	1057	GACccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTCT	1116

Sbjct	1039	.....	1098
Query	1117	GTGGCGCTGGGCCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCCA	1176
Sbjct	1099	.....	1158
Query	1177	ATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAAC	1236
Sbjct	1159	.....	1218
Query	1237	ATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCTCC	1296
Sbjct	1219	.....	1278
Query	1297	ATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGTG	1356
Sbjct	1279	.....	1338
Query	1357	TACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGCT	1416
Sbjct	1339	.....	1398
Query	1417	TTTCTCTGTCACACATACACTCCCCACGAACTGACACGGGTGGCTTCAGCCCTCAGAAAA	1476
Sbjct	1399	.....	1458
Query	1477	CTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTC	1536
Sbjct	1459	.....	1518
Query	1537	ATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTCGATATCTCTTCAACTGGGCGGTGAAG	1596
Sbjct	1519	.....T.....	1578
Query	1597	ACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGCGCCTCCTGGATTTATCCAGCTGGTTC	1656
Sbjct	1579	.....	1638
Query	1657	ACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	1639	.....C...	1695

>gb|AF177036.1| Hepatitis C virus subtype 2a strain HC-J6CH clone pJ6CF, complete genome
Length=9711

Score = 3075 bits (1665), Expect = 0.0
Identities = 1673/1677 (99%), Gaps = 0/1677 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7700	.....	7759
Query	97	CGATATCACAAACAAGGTGTACTGTACCACAACAAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7760	.....	7819
Query	157	GTAACTTTGTAGTAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	7820	.....	7879
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	7880	.....	7939
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	7940	.....	7999
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	8000	.....	8059
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCACCAAG	456
Sbjct	8060	.....	8119
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	8120	.....	8179
Query	517	AAGATGGCCCTTTATGACATTACACAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	8180	.....	8239
Query	577	GGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	8240	.....	8299
Query	637	AAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	8300	.....	8359
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCGAGGAGGCCACACT	756
Sbjct	8360	.....	8419
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	8420	.....	8479
Query	817	CAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCTCACCCTAGCATGGGGAAC	876

Sbjct	8480	.....	8539
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	8540	.....	8599
Query	937	ACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	8600	.....	8659
Query	997	GACGAGCGGAACCTGAGAGCCTTACGGAGGCTATGACCAGGTATTCTGCCCCTCTGGT	1056
Sbjct	8660	.....	8719
Query	1057	GACccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTCT	1116
Sbjct	8720	.....	8779
Query	1117	GTGGCGCTGGGCCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCCA	1176
Sbjct	8780	.....	8839
Query	1177	ATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAAC	1236
Sbjct	8840	.....	8899
Query	1237	ATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCTCTGATGACACACTTCTTCTCC	1296
Sbjct	8900	.....	8959
Query	1297	ATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGTG	1356
Sbjct	8960	.....	9019
Query	1357	TACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGCT	1416
Sbjct	9020	.....	9079
Query	1417	TTTTCTCTGCACACATACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGAAAA	1476
Sbjct	9080	.....	9139
Query	1477	CTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTC	1536
Sbjct	9140	.....	9199
Query	1537	ATCTCCCGTGGGGGAGAGCGGCCGTCTGCGGTGATATCTCTTCAACTGGGCGGTGAAG	1596
Sbjct	9200	.....T.....T.....	9259
Query	1597	ACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGGCCTCCTGGATTTATCCAGCTGGTTC	1656
Sbjct	9260	.....A.....	9319
Query	1657	ACCGTCGGCGCCGGCGGGGCGACATTTATCACAGCGTGTGCGTGCCCGACCACGC	1713
Sbjct	9320	.....C...	9376

>gb|AY973858.1| Hepatitis C virus isolate 2a-con polyprotein gene, NS5B RNA dependent RNA polymerase region, partial cds
Length=1776

Score = 3014 bits (1632), Expect = 0.0
Identities = 1662/1677 (99%), Gaps = 0/1677 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	34	.....G.....	93
Query	97	CGATATCACAACAAGGTGTACTGTACCACAACAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	94	.....C.....	153
Query	157	GTAACTTTTGATAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	154	.....T.....	213
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	214	.....	273
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	274	.....C.....	333
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	334	.....C..	393
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCCAACCAAG	456
Sbjct	394	.....	453
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	454	.....	513
Query	517	AAGATGGCCCTTTATGACATTACACAAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	514	.....	573
Query	577	GGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636

Sbjct	574	.....	633
Query	637	AAGGACCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	634	.....	693
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCAGGAGGCCCCACACT	756
Sbjct	694	.....	753
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	754	.....G.....C...C.....	813
Query	817	CAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCTCACCCTAGCATGGGGAAC	876
Sbjct	814	.....	873
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	874	.....G.....G.....	933
Query	937	ACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	934	..G.....	993
Query	997	GACGAGCGGAACCTGAGAGCCTTACGGAGGCTATGACCAGGTATTCTGCCCCTCCTGGT	1056
Sbjct	994	.....	1053
Query	1057	GAccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTCT	1116
Sbjct	1054	.....	1113
Query	1117	GTGGCGCTGGGCCCACAAGGCCGCGCAGATACTACCTGACCAGAGACCCTACCACTCCA	1176
Sbjct	1114	.....	1173
Query	1177	ATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAAC	1236
Sbjct	1174	.....	1233
Query	1237	ATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCTCTGATGACACACTTCTTCTCC	1296
Sbjct	1234	.....	1293
Query	1297	ATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGTG	1356
Sbjct	1294	.....T.....T.....	1353
Query	1357	TACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGCT	1416
Sbjct	1354	.....	1413
Query	1417	TTTTCTCTGCACACATACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGAAAA	1476
Sbjct	1414	.....	1473
Query	1477	CTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTC	1536
Sbjct	1474	.....	1533
Query	1537	ATCTCCCGTGGGGGAGAGCGGCCGTCTGCGGTGATATCTCTTCAACTGGGCGGTGAAG	1596
Sbjct	1534	.....T.....	1593
Query	1597	ACCAAGCTCAAACCTCACTCCATTGCCGAGGCGCGCCTCCTGGATTTATCCAGCTGGTTC	1656
Sbjct	1594	.....	1653
Query	1657	ACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	1654	.....C...	1710

>dbj|D00944.1|HPCPOLP Hepatitis C virus genomic RNA for polyprotein, complete cds
Length=9589

Score = 2737 bits (1482), Expect = 0.0
Identities = 1613/1678 (96%), Gaps = 2/1678 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7700	.....C.....A.....G..A.....	7759
Query	97	CGATATCACAAACAAGGTGTACTGTACCACAACAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7760	.....T.....T.....	7819
Query	157	GTAACCTTTTGATAGGATGCAAGTGCTCGACTC-CTACTACGACTCAGTCTTAAAGGACAT	215
Sbjct	7820	.....C.....G.T.-.T..T.....G.....	7878
Query	216	TAAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTT	275
Sbjct	7879	.....T.....TT.A.....C.....	7938
Query	276	AACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTT	335
Sbjct	7939	...T.....C.....C..G.....	7998
Query	336	GTCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGA	395
Sbjct	7999	.....A.....A...A..C.	8058

Query	396	AACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCACCAA	455
Sbjct	8059	.....T.....C.....	8118
Query	456	GGGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGA	515
Sbjct	8119	.....T.....	8178
Query	516	GAAGATGGCCCTTTATGACATTACACAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTA	575
Sbjct	8179	...A.....T..C.....G.....	8238
Query	576	TGGATTCCAGTATTCCTCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAA	635
Sbjct	8239	.....C.....G.....G.....	8298
Query	636	GAAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAG	695
Sbjct	8299	...A.....	8358
Query	696	AGACATCAGGACTGAGGAGTCCATATATCGGGCTGCTCCTTGCCCCGAGGAGGCCACAC	755
Sbjct	8359	.....T..T.....	8418
Query	756	TGCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGG	815
Sbjct	8419	.....A..G.....C.....	8478
Query	816	CCAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCTCACCCTAGCATGGGGAA	875
Sbjct	8479	...G.....T.....	8538
Query	876	CACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCC	935
Sbjct	8539	.....T.....C.....G.....T.....	8598
Query	936	CACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGA	995
Sbjct	8599	.....G.....	8658
Query	996	GGACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCTCCTGG	1055
Sbjct	8659	.....	8718
Query	1056	TGAcccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTC	1115
Sbjct	8719	.....A.....C.....	8778
Query	1116	TGTGGCGCTGGGCCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCC	1175
Sbjct	8779	.....T.....	8838
Query	1176	AATCGCCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAA	1235
Sbjct	8839	.....A.....	8898
Query	1236	CATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCTC	1295
Sbjct	8899	.....A.....	8958
Query	1296	CATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGT	1355
Sbjct	8959	.....C.....T..T.....	9018
Query	1356	GTA TCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGC	1415
Sbjct	9019	.....C.....C.....	9078
Query	1416	TTTTTCTCTGCACACATACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGAAA	1475
Sbjct	9079	...C.....	9138
Query	1476	ACTTGGGGCGCCACCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCT	1535
Sbjct	9139	.....	9198
Query	1536	CATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTGATATCTCTTCAACTGGGCGGTGAA	1595
Sbjct	9199	.....T.....C.....	9258
Query	1596	GACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGCGCTCCTGGATTTATCCAGCTGGTT	1655
Sbjct	9259	.....A.....	9318
Query	1656	CACCGTCGCGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	9319	...T.....C...	9376

>dbj|AB047641.1| Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-2
Length=9659

Score = 2643 bits (1431), Expect = 0.0
Identities = 1596/1678 (95%), Gaps = 2/1678 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTG TAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7700	.....C.....A.....T.....G.....	7759
Query	97	CGATATCACAACAAGGTGTACTGTACCACAACAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7760	.....C.....T.....G.....	7819

Query	157	GTAAC TTTTGATAGGATGCAAGTGC TCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	7820	.....G.....T.....C	7879
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	7880	.....T.....A.....T.....A.....	7939
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	7940	.....C.....C..G..C.....	7999
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	8000	.....C..	8059
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCCAACAAG	456
Sbjct	8060	.....C.....A	8119
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	8120	.....T.....	8179
Query	517	AAGATGGCCCTTTATGACATTACACAAAACTTCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	8180	.....TG.C.....C.....A.....	8239
Query	577	GGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	8240	.....C.....C.....G.....G.....	8299
Query	637	AAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	8300	..A.....A.....C.....	8359
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCGAGGAGGCCACACT	756
Sbjct	8360	.....C.....T...C.....	8419
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	8420	.....T.....	8479
Query	817	CAAACCTGCGGTACAGGCGTTGCCGCGCCAGCGGGTGCTCACCCTAGCATGGGGAAC	876
Sbjct	8480	..GT.....T.....	8539
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	8540	.....G.....CA.....C.....C..C..G.....G.T.....	8599
Query	937	ACAATGCTGGTATGCGGCATGACTTGTTGTCTCATCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	8600	.....C.....	8659
Query	997	GACGAGCGGAACCTGAGAGCCTTACGGAGGCTATGACCAGGTATTCTGCCCTCCTGGT	1056
Sbjct	8660	..T.....C	8719
Query	1057	GACccccccAGACCGGAGTATGATCT-GGAGCTGATAACATCTTGCTCCTCAAATGTGTC	1115
Sbjct	8720	.....A.....-..T.....T.....	8778
Query	1116	TGTGGCGCTGGGCCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCC	1175
Sbjct	8779	.....T.....	8838
Query	1176	AATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAA	1235
Sbjct	8839	.....C.....	8898
Query	1236	CATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCTC	1295
Sbjct	8899	.....	8958
Query	1296	CATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGT	1355
Sbjct	8959	...C.....C.....T.....T.....T.....	9018
Query	1356	GTA TCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGC	1415
Sbjct	9019	.....A.....T.....C.....C.....C.....	9078
Query	1416	TTTTTCTCTGCACACATACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGAAA	1475
Sbjct	9079	...C.....T.....G.....	9138
Query	1476	ACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCT	1535
Sbjct	9139	.....T.....T.....G.....A.....	9198
Query	1536	CATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTGATATCTTCAACTGGGCGGTGAA	1595
Sbjct	9199	.....A.....T.....G.....T.....	9258
Query	1596	GACCAAGCTCAAAC TACTCCATTGCCGAGGCGCGCCTCCTGGATTTATCCAGCTGGTT	1655
Sbjct	9259	A.....	9318
Query	1656	CACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGTGCCCGACCACGC	1713
Sbjct	9319	.....C...	9376

>dbj|AB047645.1| Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-6
Length=9683

Score = 2549 bits (1380), Expect = 0.0
 Identities = 1579/1678 (94%), Gaps = 2/1678 (0%)
 Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7697	.....C.....A.....G..A.....G.....	7756
Query	97	CGATATCACAACAAGGTGTACTGTACCACAACAAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7757	.....C.....T.....T.G.....	7816
Query	157	GTAACTTTGTATAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	7817	.....A....T..T.....C	7876
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	7877	.....G.....T.....G.....A..G	7936
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	7937	..T..G.....C.....C..G.....	7996
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	7997	A..A.....G.....A.....C..	8056
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGACCCCAACCAAG	456
Sbjct	8057	.....T.....C.....A.....	8116
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	8117	.....	8176
Query	517	AAGATGGCCCTTTATGACATTACACAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	8177	.....TG.C.....G.....	8236
Query	577	GGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	8237	..T.....C.....T.....G.....G.....	8296
Query	637	AA-GGACCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAG	695
Sbjct	8297	..A..-.....C.....	8355
Query	696	AGACATCAGGACTGAGGAGTCCATATATCGGGCTGCTCCTTGCCCCGAGGAGGCCACAC	755
Sbjct	8356	.....AA.....C.A.....C.....G...	8415
Query	756	TGCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGG	815
Sbjct	8416	.....G.....C.....C.....	8475
Query	816	CCAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCTCACCCTAGCATGGGGAA	875
Sbjct	8476	...GT.....	8535
Query	876	CACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCC	935
Sbjct	8536	.....T..A.....C.....C..G.....G.A.....	8595
Query	936	CACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGA	995
Sbjct	8596	.....C.....T.....	8655
Query	996	GGACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCTCCTGG	1055
Sbjct	8656	.....A.....	8715
Query	1056	TGAcccccccAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTC	1115
Sbjct	8716	.....A.....C.....T.....	8775
Query	1116	TGTGGCGCTGGGCCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTCC	1175
Sbjct	8776	.....A..C.....G..G.....G.....	8835
Query	1176	AATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAAA	1235
Sbjct	8836	...T.....A.....	8895
Query	1236	CATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCTC	1295
Sbjct	8896	.....T..A.....T.....	8955
Query	1296	CATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGGT	1355
Sbjct	8956	.....T.....C.....T.....T....	9015
Query	1356	GTAATCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAGGTTACATGGGCTTGACGC	1415
Sbjct	9016	.....T.....C.....C.....G...	9075
Query	1416	TTTTTCTCTGCACACATACACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGAAA	1475
Sbjct	9076	C.....G.....	9135
Query	1476	ACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCT	1535
Sbjct	9136	.....A.....T.....G.....A.....	9195
Query	1536	CATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTCGATATCTCTTCAACTGGGCGGTGAA	1595

Sbjct	9196	.....C.....T.....G.....G	9255
Query	1596	GACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGCGCCTCCTGGATTTATCCAGCTGGTT	1655
Sbjct	9256	.....A.....T.....	9315
Query	1656	CACCGTCGGCGCCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCCGACCACGC	1713
Sbjct	9316	T.....C...	9373

>gb|AF238483.1| Hepatitis C virus subtype 2a strain MD2a-4, complete genome
Length=9416

Score = 2523 bits (1366), Expect = 0.0
Identities = 1596/1710 (93%), Gaps = 6/1710 (0%)
Strand=Plus/Plus

Query Sbjct	7 7636	ATGTCGTA-TACATGGACAGGCGCCT-TGATCACTCCTTGTAGTCCCGAAGAGGAGAAGT.....C.-.C.....C.-.G.C.A.A.....C.....A.....	64 7693
Query Sbjct	65 7694	TACCGATTAAACCCCTTGAGCAACTCCCTGTTGCGATATCACAAACAAGGTGTACTGTACCA....A.....GT.....A.....T.	124 7753
Query Sbjct	125 7754	CAACAAAGAGCGCCTCACTAAGGGGCTAAAAAGGTAACTTTTGATAGGATGCAAGTGCTCG ..T.....T.....G.....C.....C.....	184 7813
Query Sbjct	185 7814	ACTCCTACTACGACTCAGTCTTAAAGGACATTAAGCTAGCGGCCTCCAAGGTCACCGCAA ..G..C.T.....C.....T.....GT....	244 7873
Query Sbjct	245 7874	GGCTCCTCACCATGGAGGAGGCTTGCCAGTTAACCCACCCCATTTCTGCAAGATCTAAAT.....T.A.....C.....G.....C....	304 7933
Query Sbjct	305 7934	ATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTGTCCGGGAGGGCCGTTAACCACATCAAGT....A.....A.....A.....C.....	364 7993
Query Sbjct	365 7994	CCGTGTGGAAGGACCTCCTGGAGGACTCAGAAACACCAATTCCCACAACCATTATGGCCA.....A.....C.....T..G.....C.....	424 8053
Query Sbjct	425 8054	AAAATGAGGTGTTCTGCGTGGACCCACCAAGGGGGCAAGAAAGCAGCTCGCCTTATCG.....C.....T.....	484 8113
Query Sbjct	485 8114	TTTACCCTGACCTCGGCGTCAGGGTCTGCGAGAAGATGGCCCTTTATGACATTACACAAA.....A.....A.....T..C.....	544 8173
Query Sbjct	545 8174	AACTTCCTCAGGCGGTGATGGGGGCTTCTTATGGATTCCAGTATCCCCGCTCAGCGGG .G.....C.....C.....T..A..A....	604 8233
Query Sbjct	605 8234	TAGAGTTTCTCTTGAAAGCATGGGCGGAAAAGAAGGACCCTAT-GGGTTTTTCGTATGAT .G.....G.....A.....-..T.....	663 8292
Query Sbjct	664 8293	ACCCGATGCTTTTGA CTCAACCGTCACTGAGAGAGACATCAGGACTGAGGAGTCCATATAT.....A.....C	723 8352
Query Sbjct	724 8353	CGGGCCTGCTCCTTGCCCCGAGGAGGCCACACTGCCATACACTCGCTAACTGAGAGACTT.....C.....A..T.....T.....G.....	783 8412
Query Sbjct	784 8413	TACGTGGGAGGGCCTATGTTCAACAGCAAGGGCCAAACCTGCGGGTACAGGCGTTGCCGC.....G.....C.....A.....T.....	843 8472
Query Sbjct	844 8473	GCCAGCGGGGTGCTCACCCTAGCATGGGGAACACCATCACATGCTACGTGAAAGCCTTA.....A.....T.....C..	903 8532
Query Sbjct	904 8533	GCGGCTTGTAAGCTGCAGGGATAATCGCGCCACAATGCTGGTATGCGGCGATGACTTG ..A.....G.....G.....G.T.....C.....	963 8592
Query Sbjct	964 8593	GTTGTCATCTCAGAAAGCCAGGGGACCGAGGAGGACGAGCGGAACCTGAGAGCCTTCACG.....T.....	1023 8652
Query Sbjct	1024 8653	GAGGCTATGACCAGGTATTCTGCCCTCCTGGTGAAGAGACCGGAGTATGATCTG.....T.....A.....C...	1083 8712
Query Sbjct	1084 8713	GAGCTGATAACATCTTGCTCCTCAAATGTGTCTGTGGCGCTGGGCCCACAAGGCCGCCGC.....T.....C.....AA.....TG.....	1143 8772
Query Sbjct	1144 8773	AGATACTACCTGACCAGAGACCCTACCACTCCAATCGCCCGGGCTGCCTGGGAAACAGTT.....C.....T.....	1203 8832
Query Sbjct	1204 8833	AGACACTCCCCTGTCAATTTCATGGCTGGGAAACATCATCCAGTACGCCCCGACCATATGG.....A..A.....	1263 8892
Query Sbjct	1264 8893	GCTCGCATGGTCCTGATGACACACTTCTTCTCCATTCTCATGGCTCAAGACACGCTGGAC.....C.....	1323 8952

Query	1324	CAGAACCTCAACTTTGAGATGTACGGAGCGGTGTACTCCGTGAGTCCCTTGGACCTCCCA	1383
Sbjct	8953	.....T.....T.....T.....	9012
Query	1384	GCTATAATTGAAAGGTTACATGGGCTTGACGCTTTTTCTCTGCACACATACACTCCCCAC	1443
Sbjct	9013	..C.....C....C.....C.....T.....	9072
Query	1444	GAACTGACACGGGTGGCTTCAGCCCTCAGAAACTTGGGGCGCCACCCCTCAGAGCGTGG	1503
Sbjct	9073	.....G.....A.....	9132
Query	1504	AAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTCATCTCCCGTGGGGGGAGAGCGGCCGTC	1563
Sbjct	9133	.....T.....G.....T.....N.....A.....T	9192
Query	1564	TGCGGTCGATATCTCTTCAACTGGGCGGTGAAGACCAAGCTCAAACCTACTCCATTGCCG	1623
Sbjct	9193	.....G.....	9252
Query	1624	GAGGCGCGCCTCCTGGATTTATCCAGCTGGTTACCGTCGGCGCCGGCGGGGGCGACATT	1683
Sbjct	9253	.....A.....T.....	9312
Query	1684	TATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	9313	.....C...	9342

>gb|AY746460.1| Hepatitis C virus genotype 2a polyprotein gene, complete cds
Length=9689

Score = 2499 bits (1353), Expect = 0.0
Identities = 1584/1698 (93%), Gaps = 6/1698 (0%)
Strand=Plus/Plus

Query	19	TGGACAGGCGCCT-TGATCACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCC	77
Sbjct	7685	.....-G..C....A.....C.....A.....G...G.C.....	7743
Query	78	CTTGAGCAACTCCCTGTTGCGATATCACAACAAGGTGTACTGTACCACAACAAAGAGCGC	137
Sbjct	7744	.....GT.....C.....A.....T.....C...	7803
Query	138	CTCACTAAGGGCTAAAAAGGTAACCTTTTGATAGGATGCAAGTGCTCGACTCCT-ACTACG	196
Sbjct	7804	.....G.....C.....-G..C.T....	7862
Query	197	ACTCAGTCTTAAAGGACATTAAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCA	256
Sbjct	7863	.....C.....T....G.....C	7922
Query	257	TGGAGGAGGCTTGCCAGTTAACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGG	316
Sbjct	7923	.....A.....C....T.....C.....	7982
Query	317	CTAAGGAGGTCCGCAGCTTGTCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGG	376
Sbjct	7983	.....G.....	8042
Query	377	ACCTCCTGGAGGACTCAGAAACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGT	436
Sbjct	8043	.....A.....C.....C.....A....	8102
Query	437	TCTGCGTGGACCCACCAAGGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACC	496
Sbjct	8103	.....T.....C.....	8162
Query	497	TCGGCGTCAGGGTCTGCGAGAAGATGGCCCTTTATGACATTACACAAAACTTCTCAGG	556
Sbjct	8163	.....TG.C.....G.....	8222
Query	557	CGGTGATGGGGGCTTCTTATGGATTCCAGTATCCCCCGCTCAGCGGGTAGAGTTTCTCT	616
Sbjct	8223	.....C.....G.....	8282
Query	617	TGAAAGCATGGGCGGAAAAGA-AGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTT	675
Sbjct	8283	....G.....T....G..-.....	8341
Query	676	GACTCAACCGTCACTGAGAGAGACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCC	735
Sbjct	8342	.....T.....C.....	8401
Query	736	TTGCCCCGAGGAGGCCACACTGCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGG	795
Sbjct	8402	C.....	8461
Query	796	CCTATGTTCAACAGCAAGGGCCAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTG	855
Sbjct	8462	..C.....GG.....C.....T.....	8521
Query	856	CTCACCCTAGCATGGGGAACACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTA	915
Sbjct	8522	.....C.....A.....C.....C.....G	8581
Query	916	GCTGCAGGGATAATCGCGCCACAATGCTGGTATGCGGCGATGACTTGTTGTCATCTCA	975
Sbjct	8582	..C..C...T..G.T..A.....G.....C...C.....G	8641
Query	976	GAAAGCCAGGGGACCGAGGAGGACGAGCGGAACCTGAGAGCCTTACGGAGGCTATGACC	1035
Sbjct	8642	.....GTT.....G..C.....	8701

Query	1036	AGGTATTCTGCCCTCCTGGTGA	1095
Sbjct	8702	.....C..C.....T.....A..C..C.....A.....	8761
Query	1096	TCTTGCTCCTCAAATGTGTCTGTGGCGCTGGGCCACAAGGCCGCCGAGATACTACCTG	1155
Sbjct	8762	.....T.....C.....A..AA...T.....A...T.....	8821
Query	1156	ACCAGAGACCCTACCACTCCAATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCT	1215
Sbjct	8822	.....	8881
Query	1216	GTCAATTCATGGCTGGGAAACATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTC	1275
Sbjct	8882	.....T.....T..A.....	8941
Query	1276	CTGATGACACACTTCTTCTCCATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAAC	1335
Sbjct	8942	.....C.....C.....T.....T.....	9001
Query	1336	TTTGAGATGTACGGAGCGGTGTACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAA	1395
Sbjct	9002	.....C.....	9061
Query	1396	AGGTTACATGGGCTTGACGCTTTTTCTCTGCACACATACTCCCCACGAAGTACACGG	1455
Sbjct	9062	...C....C.....C.....T.....G...	9121
Query	1456	GTGGCTTCAGCCCTCAGAAACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCA	1515
Sbjct	9122	.....AG.....T.....G	9181
Query	1516	CGTGCAGTCAGGGCGTCCCTCATCTCCCGTGGGGGAGAGCGGCCGTCTGCGGTCGATAT	1575
Sbjct	9182	.....T.....A.....A.T.....	9241
Query	1576	CTCTTCAACTGGGCGGTGAAGACCAAGCTCAAACCTACTCCATTGCCGGAGGCGCGCCTC	1635
Sbjct	9242	.....A.....	9301
Query	1636	CTGGATTTATCCAGCTGGTTACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTG	1695
Sbjct	9302	.....T.....	9361
Query	1696	TCGCGTGCCCGACCACGC	1713
Sbjct	9362	C.....C... 9379	

>gb|AF238484.1| Hepatitis C virus subtype 2a strain MD2a-5, complete genome
Length=9416

Score = 2494 bits (1350), Expect = 0.0
Identities = 1572/1681 (93%), Gaps = 8/1681 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7666	.....C.....A.....A.....A.....	7725
Query	97	CGATATCACAACAAGGTGTACTGTACCACAACAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7726	.....T...T.....T.G.....	7785
Query	157	GTAACCTTTTGATAGGATGCAAGTGCTCGACTC-CTACTACGACTCAGTCTTAAAGGACAT	215
Sbjct	7786	.....C.....G.T.-.T..T.....	7844
Query	216	TAAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTT	275
Sbjct	7845	C.....G.....A....A...G.....G.....G..T.....	7904
Query	276	AACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGAGCTT	335
Sbjct	7905	G..T.....C..G.....	7964
Query	336	GTCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGA	395
Sbjct	7965	.....A.....C.	8024
Query	396	AACACCAATTCCCAACAACCATATGGCCAAAATGAGGTGTTCTGCGTGGAACCCACCAA	455
Sbjct	8025	.....T..G.....C.....	8084
Query	456	GGGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGA	515
Sbjct	8085	.....T.....C.....T.....T.....	8144
Query	516	GAAGATGGCCCTTTATGACATTACACAAAACCTTCCTCAGGCGGTGATGGGGGCTTCTTA	575
Sbjct	8145	.....TG.C.....G.....	8204
Query	576	TGGATTCCAGTATTTCCCGCTCAGCGGGTAGAGTTTC-TCTTGAAAGCATGGGCGGAAA	634
Sbjct	8205	...C.....C.....A.....G.-...C.....G.....	8263
Query	635	AGA-AGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAG	693
Sbjct	8264	...G..-.....T.....	8322
Query	694	AGAGACATCAGGACTGAGGAGTCCATATATCGGGCTGCTCCTTGCCCGAGGAGGCCAC	753
Sbjct	8323	.....A.....C.AA..T..T.....G.	8382
Query	754	ACTGCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAG	813

Sbjct	8383	.....T.....G.....C..C.....T.....	8442
Query	814	GGCCAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCTCACCCTAGCATGGGG	873
Sbjct	8443	.....G.....T.....T.....	8502
Query	874	AACACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCG	933
Sbjct	8503	.....T.....C.....C..G.....G.....G.T...	8562
Query	934	CCCACAATGCTGGTATGCGGCGATGACTTGTTGTCTCATCTCAGAAAGCCAGGGGACCGAG	993
Sbjct	8563	.....C.....A.....T...	8622
Query	994	GAGGACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCTCCT	1053
Sbjct	8623	.....T.....	8682
Query	1054	GGTGACccccccAGACCGGAGTATGATCT-GGAGCTGATAACATCTTGCTCCTCAAATGT	1112
Sbjct	8683	.....A.....-..T.....C..T.....	8741
Query	1113	GTCTGTGGCGCTGGGCCACAAAGGCCGCCGAGATACTACCTGACCAGAGACCTACCAC	1172
Sbjct	8742	.....T.....G.....	8801
Query	1173	TCCAATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGG	1232
Sbjct	8802	.....C.....	8861
Query	1233	AAACATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCTGATGACACACTTCTT	1292
Sbjct	8862	.....A..G.G.....T..	8921
Query	1293	CTCCATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGC	1352
Sbjct	8922	.....C.....C.....T.....T.....	8981
Query	1353	GGTGTACTCCGTGAGTCCCTTGACCTCCAGCTATAATTGAAAGGTTACATGGGCTTGA	1412
Sbjct	8982	.....T.....C.....C.....	9041
Query	1413	CGCTTTTTTCTCTGCACACATACTCCCCACGAACTGACACGGGTGGCTTCAGCCCTCAG	1472
Sbjct	9042	.....C..C.....G.....A.....	9101
Query	1473	AAAATTGGGGGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTC	1532
Sbjct	9102	.....T.....G.....A.....	9161
Query	1533	CCTCATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTGCATATCTCTTCAACTGGGCGGT	1592
Sbjct	9162	.....A.....G.....T.....G.....	9221
Query	1593	GAAGACCAAGCTCAAACCTCACTCCATTGCCGGAGGCGCGCCTCCTGGATTTATCCAGCTG	1652
Sbjct	9222	.....A.....T..	9281
Query	1653	GTTACCCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACG	1712
Sbjct	9282	...T.....C..	9341
Query	1713	C 1713	
Sbjct	9342	. 9342	

>gb|AF169003.1| Hepatitis C virus subtype 2a isolate G2aK1, complete genome
Length=9693

Score = 2490 bits (1348), Expect = 0.0
Identities = 1567/1680 (93%), Gaps = 6/1680 (0%)
Strand=Plus/Plus

Query	37	ACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCCCTTGAGCAACTCCCTGTTG	96
Sbjct	7697	.....C.....A.....G.....	7756
Query	97	CGATATCACAACAAGGTGTACTGTACCACAACAAGAGCGCCTCACTAAGGGCTAAAAAG	156
Sbjct	7757	..G..C.....T...T.....GC.....	7816
Query	157	GTAACCTTTGATAGGATGCAAGTGCTCGACTCCTACTACGACTCAGTCTTAAAGGACATT	216
Sbjct	7817	.....G....T..T.....C	7876
Query	217	AAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCATGGAGGAGGCTTGCCAGTTA	276
Sbjct	7877	.....G..G.....T.....A.....A..G	7936
Query	277	ACCCACCCCATTTCTGCAAGATCTAAATATGGGTTTGGGGCTAAGGAGGTCCGCAGCTTG	336
Sbjct	7937	..T.....G.....A.....C.....	7996
Query	337	TCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGACCTCCTGGAGGACTCAGAA	396
Sbjct	7997	.....C.....A.....C..	8056
Query	397	ACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTTCTGCGTGGACCCCAACCAAG	456
Sbjct	8057	.....T..G.....C.....C.....	8116
Query	457	GGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCTCGGCGTCAGGGTCTGCGAG	516
Sbjct	8117	.....T.....C.....T.....	8176

Query	517	AAGATGGCCCTTTATGACATTACACAAAACTTCCTCAGGCGGTGATGGGGGCTTCTTAT	576
Sbjct	8177	.....C.....TG.C.....G.....	8236
Query	577	GGATTCCAGTATTCCCCGCTCAGCGGGTAGAGTTTCTCTTGAAAGCATGGGCGGAAAAG	636
Sbjct	8237	..C.....C.....A.....G.....C.....G.....	8296
Query	637	AAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGACTCAACCGTCACTGAGAGA	696
Sbjct	8297	..A.....	8356
Query	697	GACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTTGCCCGAGGAGGCCACACT	756
Sbjct	8357	.....Y..A.....A.....C.....C..Y.....	8416
Query	757	GCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCCTATGTTCAACAGCAAGGGC	816
Sbjct	8417	.....T.....G.....G.....C.....	8476
Query	817	CAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGTGCTCACCCTAGCATGGGGAAC	876
Sbjct	8477	..G.....	8536
Query	877	ACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAGCTGCAGGGATAATCGCGCCC	936
Sbjct	8537	.....R.....C.....C..G.....G.....G.T..A...	8596
Query	937	ACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGAAAGCCAGGGGACCGAGGAG	996
Sbjct	8597	.....C.....C.....T.....	8656
Query	997	GACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAGGTATTCTGCCCT-CCTGG	1055
Sbjct	8657	.....T.....Y.....T.....-...	8715
Query	1056	TGAcCCCCcAGACCGGAGTATGATCTGGAGCTGATAACATCTTGCTCCTCAAATGTGTC	1115
Sbjct	8716	C.....A.....C.....T.....	8775
Query	1116	TGTGGCGCTGGG-CCCACAAGGCCGCCGAGATACTACCTGACCAGAGACCCTACCACTC	1174
Sbjct	8776	.....A.-...A.....G.....	8834
Query	1175	CAATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGTCAATTCATGGCTGGGAA	1234
Sbjct	8835	.....C.....T.....	8894
Query	1235	ACATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCTGATGACACACTTCTTCT	1294
Sbjct	8895	.....T..A..T.....T...T.....	8954
Query	1295	CCATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTTTGAGATGTACGGAGCGG	1354
Sbjct	8955	.....C.....C.....A.....T...	9014
Query	1355	TGTACTCCGTGAGTCCCTT-GGACCTCCCAGCTATAATTGAAAGTTACATGGGCTTGAC	1413
Sbjct	9015	.....-..C.....C.....C.....	9073
Query	1414	GCTTTTTCTCTGCACACATACTCCCCACGAAGTACACGGGTGGCTTCAGCCCTCAGA	1473
Sbjct	9074	..C..C.....G.....	9133
Query	1474	AAACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACGTGCAGTCAGGGCGTCC	1533
Sbjct	9134	.....T.....G.....	9193
Query	1534	CTCATCTCCCGTGGGGGGAGAGCGGCCGTCTGCGGTCGATATCTTCAACTGGGCGGTG	1593
Sbjct	9194	.....A..A.....G.....T.....C..G.....	9253
Query	1594	AAGACCAAGCTCAAACCTACTCCATTGCCGGAGGCGCGCCTCCTGGATTTATCCAGCTGG	1653
Sbjct	9254	..K.....A.....	9313
Query	1654	TTCACCGTCGCGCGCCGGCGGGGGCGACATTTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	9314	..T.....T.T.....T.....C...	9373

>dbj|AB047640.1| Hepatitis C virus gene for polyprotein, complete cds, clone:JCH-1
Length=9674

Score = 2488 bits (1347), Expect = 0.0
Identities = 1591/1711 (92%), Gaps = 8/1711 (0%)
Strand=Plus/Plus

Query	7	ATGTCGTATACATGGACAGGCGCCT-TGATCACTCCTTGTAGTCCCGAAGAGGAGAAGTT	65
Sbjct	7670	.....A...T.C.....C..-..G..C.A..A.....C.....A.....	7728
Query	66	ACCGATTAACCCCTTGAGCAACTCCCTGTTGCGATATCACAACAAGGTGTACTGTACCAC	125
Sbjct	7729	G..A.....T.....G.....C..T.....A.....T..	7788
Query	126	AACAAAGAGCGCCTCACTAAGGGCTAAAAAGGTAACCTTTTGATAGGATGCAAGTGCTCGA	185
Sbjct	7789	.T.....T.....	7848
Query	186	CTCCTACTACGACTCAGTCTTAAAGGACATTAAGCTAGCGGCCTCCAAGGTCACCGCAAG	245
Sbjct	7849	.G....T..T..T.....C.....G.....	7908

Query	246	GCTCCTCACCATGGAGGAGGCTTGCCAGTTAACCCACCCCATTTCTGCAAGATCTAAATA	305
Sbjct	7909	.....T.A.....G.....A..G.....C.....C..G..	7968
Query	306	TGGGTTTGGGGCTAAGGAGGTCCGCAGCTTGTCCGGGAGGGCCGTTAACCACATCAAGTC	365
Sbjct	7969	.....C.....	8028
Query	366	CGTGTGGAAGGACCTCCTGGAGGACTCAGAAACACCAATTTCCACAACCATTATGGCCAA	425
Sbjct	8029	.....T....A.....C.....T.....C.....	8088
Query	426	AAATGAGGTGTTCTGCGTGGACCCACCAAGGGGGGCAAGAAAGCAGCTCGCCTTATCGT	485
Sbjct	8089	.....G.....T..A...C.....	8148
Query	486	TTACCCTGACCTCGGCGTCAGGGTCTGCGAGAAGATGGCCCTTTATGACATTACACAAA	545
Sbjct	8149	.....TG.C.....	8208
Query	546	ACTTCCTCAGGCGGTGATGGGGGCTTCTTATGGATTCCAGTATTTCCCCCGCTCAGCGGGT	605
Sbjct	8209	G.....C.....C.....	8268
Query	606	AGAGTTTCTCTTGAAAGCATGGGCGGAAAAGA-AGGACCCTATGGGTTTTTTCGTATGATA	664
Sbjct	8269	G.....G.....G.-.....	8327
Query	665	CCCGATGCTTTGACTCAACCGTCACTGAGAGAGACATCAGGACTGAGGAGTCCATATATC	724
Sbjct	8328	.....C.....	8387
Query	725	GGGCCTGCTCCTTGCCCGAGGAGGCC-ACACTGCCATACACTCGCTAACTGAGAGACTT	783
Sbjct	8388	A.....A.....G.-.....G.....C	8446
Query	784	TACGTGGGAGGGCCTATGTTCAACAGCAAGGGCCAAACCTGCGGGTACAGGCGTTGCCGC	843
Sbjct	8447	..T.....C.....GT.....	8506
Query	844	GCCAGCGGGGTGCTCACCCTAGCATGGGGAACACCATCACATGCTACGTGAAAGCCTTA	903
Sbjct	8507	.....T.....T.....T..A.....C..	8566
Query	904	GCGGCTTGTAAGCTGCAGGGATAATCGCGCCACAATGCTGGTATGCGGCGATGACTTG	963
Sbjct	8567	.....C..G.....G.....T.....G.....C.....	8626
Query	964	GTTGTCATCTCAGAAAGCCAGGGGACCGAGGAGACGAGCGGAACCTGAGAGCCTTCACG	1023
Sbjct	8627	..C.....T.....	8686
Query	1024	GAGGCTATGACCAGGTATTCTGCCCCTCCTGGTGACccccccAGACCGGAGTATGATCTG	1083
Sbjct	8687	.....A.....C...	8746
Query	1084	GAGCTGATAACATCTTGCTCCTCAAATGTGTCTGTGGCGCTGGGCCCACAAGGCCGCCGC	1143
Sbjct	8747	.....A.....T.....C.....A..T.....G.....	8806
Query	1144	AGATACTACCTGACCAGAGACCCTACCACTCCAATCGCCCGGGCTGCCTGGGAAACAGTT	1203
Sbjct	8807	.....C.....T....T.....	8866
Query	1204	AGACACTCCCCTGTCAATTCATGGCTGGGAAACATCATCCAGTACGCCCCGACCATATGG	1263
Sbjct	8867	.....T..A.....	8926
Query	1264	GCTCGCATGGTCCTGATGACACACTTCTTCTCCATTCTCATGGCTCAAGACACGCTGGAC	1323
Sbjct	8927	.T.....C..G.....C..A...	8986
Query	1324	CAGAACCTCAACTTTGAGATGTACGGAGCGGTGTACTCCGTGAGTCC-CTTGACCTCCC	1382
Sbjct	8987	.....T.....A.....T.....T..-.....	9045
Query	1383	AGCTATAATTGAAAGGTTACATGGGCTTGACGCTTTTTCTCTGCACACATACTCCCA	1442
Sbjct	9046	...C.....C.....C..C.....	9105
Query	1443	CGAAGCTGACACGGGTGGCTTCAGCCCTCAGAAAACCTGGGGCGCCACCCCTCAGAGCGTG	1502
Sbjct	9106	.....G.....	9165
Query	1503	GAAGAGCCGGGCACGTGCAGTCAGGGCGTCCCTCATCTCCCGTGGGGGAGAGCGGCCGT	1562
Sbjct	9166	.....T.....G.....T.....G.....	9225
Query	1563	CTGCGGTCGATATCTCTTCAACTGGGCGGTGAAGACCAAGCTCAAACCTCACTCCATTGCC	1622
Sbjct	9226	T.....G..C.....T.....	9285
Query	1623	GGAGGCGCGCCTCCTGGATTTATCCAGCTGGTTACCGTCGGCGCCGGCGGGGGCGACAT	1682
Sbjct	9286	.....A.....G.....T.....T.....	9345
Query	1683	TTATCACAGCGTGTGCGGTGCCCGACCACGC	1713
Sbjct	9346	.....C...	9376

>gb|AF238482.1| Hepatitis C virus subtype 2a strain MD2a-2, complete genome
Length=9416

Score = 2477 bits (1341), Expect = 0.0
Identities = 1570/1682 (93%), Gaps = 10/1682 (0%)

BLAST Basic Local Alignment Search Tool

Job Title: Nucleotide sequence (1713 letters)

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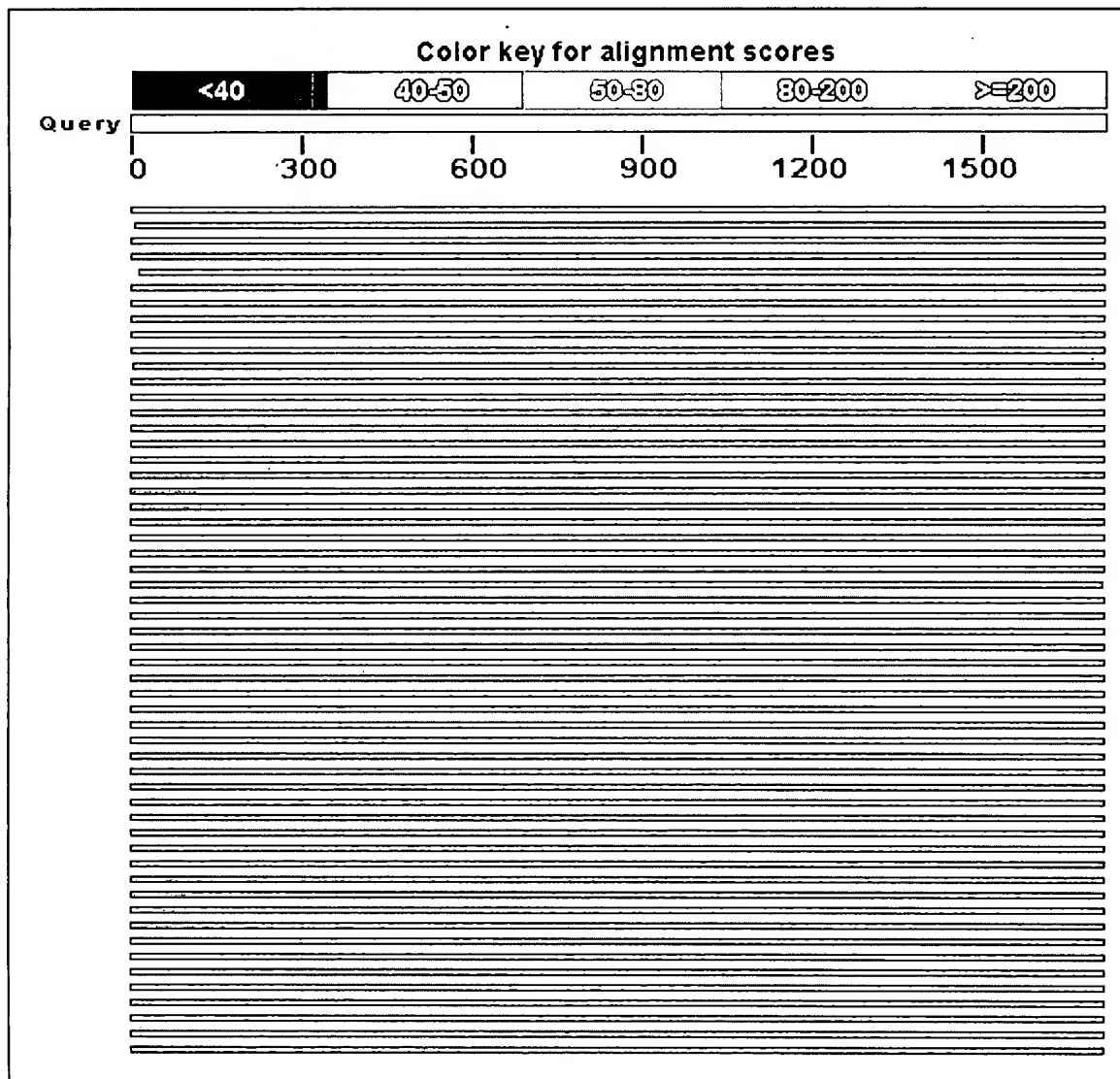
BLASTX 2.2.17 (Aug-26-2007)

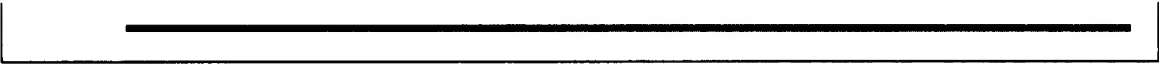
Reference: Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402. RID: HT70ANZ5013 **Database:** All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects 5,585,305 sequences; 1,931,637,290 total letters

Query= Length=1713

SEQ ID NO: 6 (✓ protein database)

Distribution of 100 Blast Hits on the Query Sequence





Sequences producing significant alignments:		Score (Bits)	E Value
ref|YP_001469630.1|	polyprotein [Hepatitis C virus genotype 2...	1122	0.0
gb|AAAY24375.1|	polyprotein [Hepatitis C virus]	1119	0.0
gb|AAAY24373.1|	polyprotein [Hepatitis C virus]	1119	0.0
sp|P26660|POLG HCVJ6	Genome polyprotein [Contains: Core prote...	1113	0.0
gb|AAAY24374.1|	polyprotein [Hepatitis C virus]	1110	0.0
dbj|BAB32874.1|	polyprotein [Hepatitis C virus]	1108	0.0
pdb|1YUY|A	Chain A, Hepatitis C Virus Ns5b Rna-Dependent Rna ...	1107	0.0
gb|AAF59943.1|AF238484_1	polyprotein [Hepatitis C virus subtype	1102	0.0
gb|AAF25613.1|AF169005_1	polyprotein [Hepatitis C virus subtype	1100	0.0
gb|AAF59942.1|AF238483_1	polyprotein [Hepatitis C virus subtype	1100	0.0
dbj|BAB32877.1|	polyprotein [Hepatitis C virus]	1100	0.0
gb|AAF59940.1|AF238481_1	polyprotein [Hepatitis C virus subtype	1098	0.0
dbj|BAB32873.1|	polyprotein [Hepatitis C virus]	1095	0.0
gb|AAU89634.1|	polyprotein [Hepatitis C virus subtype 2a]	1090	0.0
gb|AAF59944.1|AF238485_1	polyprotein [Hepatitis C virus subtype	1084	0.0
dbj|BAB32878.1|	polyprotein [Hepatitis C virus]	1083	0.0
gb|AAF59941.1|AF238482_1	polyprotein [Hepatitis C virus subtype	1082	0.0
gb|AAF25611.1|AF169003_1	polyprotein [Hepatitis C virus subtype	1080	0.0
dbj|BAD06942.1|	hepatitis C virus nonstructural protein [Hepatit	1080	0.0
sp|Q99IB8|POLG HCVJF	Genome polyprotein [Contains: Core prote...	1080	0.0
dbj|BAB32875.1|	polyprotein [Hepatitis C virus]	1079	0.0
gb|AAF25610.1|AF169002_1	polyprotein [Hepatitis C virus subtype	1078	0.0
dbj|BAB32876.1|	polyprotein [Hepatitis C virus]	1077	0.0
gb|AAF25612.1|AF169004_1	polyprotein [Hepatitis C virus subtype	1069	0.0
gb|AAZ85047.1|	polyprotein [Hepatitis C virus (isolate D54)]	1028	0.0
sp|Q68749|POLG HCVBB	Genome polyprotein [Contains: Core prote...	1023	0.0
sp|Q9QAX1|POLG HCVVA	Genome polyprotein [Contains: Core prote...	1019	0.0
gb|AAP55701.1|	polyprotein [Hepatitis C virus subtype 2b]	1016	0.0
gb|AAP55702.1|	polyprotein [Hepatitis C virus subtype 2b]	1015	0.0
gb|ABR18853.1|	polyprotein [Hepatitis C virus]	1015	0.0
gb|AAP55699.1|	polyprotein [Hepatitis C virus subtype 2b]	1014	0.0
gb|AAP55700.1|	polyprotein [Hepatitis C virus subtype 2b]	1014	0.0
gb|ABR18852.1|	polyprotein [Hepatitis C virus]	1014	0.0
gb|AAP55694.1|	polyprotein [Hepatitis C virus subtype 2b]	1013	0.0
gb|AAP55686.1|	polyprotein [Hepatitis C virus subtype 2b]	1013	0.0
gb|AAP55693.1|	polyprotein [Hepatitis C virus subtype 2b]	1012	0.0
gb|AAP55688.1|	polyprotein [Hepatitis C virus subtype 2b]	1010	0.0
gb|AAP55685.1|	polyprotein [Hepatitis C virus subtype 2b]	1010	0.0
gb|AAP55698.1|	polyprotein [Hepatitis C virus subtype 2b]	1009	0.0
gb|AAP55697.1|	polyprotein [Hepatitis C virus subtype 2b]	1009	0.0
gb|AAP55704.1|	polyprotein [Hepatitis C virus subtype 2b]	1009	0.0
sp|P26661|POLG HCVJ8	Genome polyprotein [Contains: Core prote...	1009	0.0
gb|AAF59945.1|AF238486_1	polyprotein [Hepatitis C virus subtype	1007	0.0
gb|AAP55691.1|	polyprotein [Hepatitis C virus subtype 2b]	1006	0.0
gb|AAP55696.1|	polyprotein [Hepatitis C virus subtype 2b]	1006	0.0
gb|AAP55695.1|	polyprotein [Hepatitis C virus subtype 2b]	1005	0.0
gb|AAP55703.1|	polyprotein [Hepatitis C virus subtype 2b]	1003	0.0
sp|Q9DHD6|POLG HCVJP	Genome polyprotein [Contains: Core prote...	1000	0.0
gb|AAP55692.1|	polyprotein [Hepatitis C virus subtype 2b]	999	0.0
gb|AAP55690.1|	polyprotein [Hepatitis C virus subtype 2b]	997	0.0
gb|AAP55689.1|	polyprotein [Hepatitis C virus subtype 2b]	996	0.0
gb|AAP55687.1|	polyprotein [Hepatitis C virus subtype 2b]	986	0.0
gb|ABV46232.1|	polyprotein [Hepatitis C virus subtype 1b]	892	0.0
dbj|BAC66797.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	892	0.0
dbj|EAB18807.1|	polyprotein [Hepatitis C virus]	892	0.0
gb|ABV46228.1|	polyprotein [Hepatitis C virus subtype 1b]	892	0.0
gb|ABV46160.1|	polyprotein [Hepatitis C virus subtype 1a]	892	0.0
dbj|BAC66799.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	892	0.0
gb|ABV46215.1|	polyprotein [Hepatitis C virus subtype 1b]	891	0.0
dbj|BAC66794.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	891	0.0
gb|AAF65950.1|AF207760_1	polyprotein [Hepatitis C virus subtype	891	0.0

S

gb|ABV46234.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
gb|ABV46226.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
gb|ABV46060.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
sp|Q9WMX2|POLG HCVCO	Genome polyprotein [Contains: Core prote...	890	0.0
emb|CAB46913.1|	non-structural polyprotein [Hepatitis C virus...	890	0.0
emb|CAB46911.1|	non-structural polyprotein [Hepatitis C virus...	890	0.0
gb|ABV46237.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
gb|ABV46113.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
gb|ABR18850.1|	polyprotein [Hepatitis C virus]	890	0.0
dbj|BAC66820.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	890	0.0
dbj|BAD73986.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
ref|YP_001469633.1|	polyprotein [Hepatitis C virus genotype 5...	890	0.0
gb|ABV46259.1|	polyprotein [Hepatitis C virus subtype 1a]	890	0.0
gb|AAL00900.1|	polyprotein [Hepatitis C virus subtype 1b]	890	0.0
gb|ABV46302.1|	polyprotein [Hepatitis C virus subtype 1b]	889	0.0
gb|ABV46238.1|	polyprotein [Hepatitis C virus subtype 1b]	889	0.0
gb|ABV46065.1|	polyprotein [Hepatitis C virus subtype 1b]	889	0.0
gb|AAD56196.1|AF165061_1	polyprotein [Hepatitis C virus subtype	889	0.0
dbj|BAA03905.1|	polyprotein precursor [Hepatitis C virus genotyp	889	0.0
dbj|BAC66804.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	889	0.0
dbj|BAA08120.1|	HCV polyprotein [Hepatitis C virus]	889	0.0
dbj|BAA06303.1|	polyprotein [Hepatitis C virus]	889	0.0
gb|ABV46151.1|	polyprotein [Hepatitis C virus subtype 1b]	889	0.0
gb|ABV46068.1|	polyprotein [Hepatitis C virus subtype 1b]	889	0.0
dbj|BAC66818.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	889	0.0
gb|AAF65949.1|AF207759_1	polyprotein [Hepatitis C virus subtype	889	0.0
sp|P26662|POLG HCVJA	Genome polyprotein [Contains: Core prote...	889	0.0
gb|ABV46116.1|	polyprotein [Hepatitis C virus subtype 1b]	888	0.0
gb|ABR27412.1|	polyprotein [Hepatitis C virus]	888	0.0
dbj|BAC66822.1|	RNA-dependent RNA polymerase [Hepatitis C virus]	888	0.0
sp|Q913V3|POLG HCVR6	Genome polyprotein [Contains: Core prote...	888	0.0
gb|ABV46301.1|	polyprotein [Hepatitis C virus subtype 1b]	888	0.0
gb|ABV46283.1|	polyprotein [Hepatitis C virus subtype 1b]	888	0.0
gb|AAT40682.1|	polyprotein [Hepatitis C virus]	888	0.0
gb|AAF65960.1|AF207770_1	polyprotein [Hepatitis C virus subtype	888	0.0
dbj|BAA25076.1|	polyprotein [Hepatitis C virus]	888	0.0
sp|Q91936|POLG HCVSA	Genome polyprotein [Contains: Core prote...	888	0.0
gb|ABV46242.1|	polyprotein [Hepatitis C virus subtype 1b]	887	0.0
gb|ABV46233.1|	polyprotein [Hepatitis C virus subtype 1b]	887	0.0

Alignments

>ref|YP_001469630.1| polyprotein [Hepatitis C virus genotype 2]
 gb|AAF01178.1|AF177036_1 polyprotein [Hepatitis C virus subtype 2a]
 Length=3033

Score = 1122 bits (2903), Expect = 0.0
 Identities = 569/570 (99%), Positives = 570/570 (100%), Gaps = 0/570 (0%)
 Frame = +1

Query	4	SMSYTWGTALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRKKVTFDRMQVL	183
Sbjct	2443	.....S.....	2502
Query	184	DSYYDSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK	363
Sbjct	2503	.....	2562
Query	364	SVWKDLLEDSETPIPTTMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ	543
Sbjct	2563	.....	2622
Query	544	KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESIY	723
Sbjct	2623	.....	2682
Query	724	RACSLPEEAHTAIHSLTERLYVGGPMPFNSKGQTCGYRRCRASGVLTTSMGNTITCYVkal	903
Sbjct	2683	.....	2742
Query	904	aackaagiiaptMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPGDPPRPEYDL	1083
Sbjct	2743	.....	2802

Query	1084	ELITSCSSNVSV	ALGPQGRRRYYL	TRDPTTPIARA	AWETVRHSPVNS	WLGNI	IQYAP	TIW	1263
Sbjct	2803	.....	.....	.....	.....	.....	.....	.....	2862
Query	1264	ARMVLMTHFFS	SILMAQDTLDQ	NLFEMYGAVYS	VSPLDLP	PAIIERLHGLD	AFSLHTY	TPH	1443
Sbjct	2863	.....	.....	.....	.....	.....	.....	.....	2922
Query	1444	ELTRVASALRK	LAPPLRAWKSR	ARAVRASLIS	RGGRAAVCGR	YLFNWAVKTK	LKLTP	PLP	1623
Sbjct	2923	.....	.....	.....	.....	.....	.....	.....	2982
Query	1624	EARLLDLSSW	FTVGAGGGDI	YHSVSRARPR	1713				
Sbjct	2983	.....	.....	.....	3012				

>gb|AAAY24375.1| polyprotein [Hepatitis C virus]
Length=589

Score = 1119 bits (2894), Expect = 0.0
Identities = 567/568 (99%), Positives = 568/568 (100%), Gaps = 0/568 (0%)
Frame = +1

Query	10	SYTWTGALITPCSP	EEEEKLPINPL	SNSLLRYHNKVYCTTT	KSASLRAKKVTFDR	MQVLDS	189			
Sbjct	1	..S.....	.....	.....	.....	.....	60	
Query	190	YYDSVLKDIKLA	ASKVTARLLTME	EACQLTPPHSAR	SKYGF	GAKEVRSLSGRA	VNHKSV	369		
Sbjct	61	.....	.....	.....	.....	.....	.....	120
Query	370	WKDLLEDSETPI	PTTIMAKNEVFC	VDPTKGGKKAAR	LIVYPDLGVRVCE	KMALYDITQKL	549			
Sbjct	121	.....	.....	.....	.....	.....	180	
Query	550	PQAVMGASYGFQ	YSPAQRVEFL	LKAWAEKKDP	MGFSYDTRCFD	STVTERDIRTE	ESIYRA	729		
Sbjct	181	.....	.....	.....	.....	.....	240	
Query	730	CSLP	EEAHTAIHSLTER	LYVGGP	MFN	SKQTCGYRRCRA	SGVLTTSMGNTIT	CYVkalaa	909	
Sbjct	241	.....	.....	.....	.....	.....	.....	300
Query	910	ckaagii	aPTMLVCGDDL	VVISESQGTE	EDERNLRAFTEA	MTRYSA	PPGDP	PPRPEYDLEL	1089	
Sbjct	301	.....	.....	.....	.....	.....	.....	360
Query	1090	ITSCSSNVSV	ALGPQGR	RRYYLTRDPTT	PIARA	AWETVRHSPVNS	WLGNI	IQYAPT	IWAR	1269
Sbjct	361	.....	.....	.....	.....	.....	.....	420
Query	1270	MVLMTHFFSIL	MAQDTLDQNLN	FEMYGAVYS	VSPLDLP	PAIIERLHGLD	AFSLHTYTPHEL	1449		
Sbjct	421	.....	.....	.....	.....	.....	.....	480
Query	1450	TRVASALRKL	GAPPLRAWKSR	ARAVRASLI	SRGGRAAVCGR	YLFNWAVKTKL	KLTPLEA	1629		
Sbjct	481	.....	.....	.....	.....	.....	.....	540
Query	1630	RLLDLSSW	FTVGAGGGDI	YHSVSRARPR	1713					
Sbjct	541	568					

>gb|AAAY24373.1| polyprotein [Hepatitis C virus]
Length=591

Score = 1119 bits (2894), Expect = 0.0
Identities = 567/570 (99%), Positives = 569/570 (99%), Gaps = 0/570 (0%)
Frame = +1

Query	4	SMSY	TWTGALITPC	SPEEEKLPINPL	SNSLLRYHNKV	YCTTTKSASL	RAKKVTFDRM	QVL	183
Sbjct	1	.....	.....	.....	.....	.....	.....	.....	60
Query	184	DSYYDSVLKDI	KLAASKVTARLL	TMEACQLTPPH	SARSKYGF	GAKEVRSLSG	RAVNHK	SV	363
Sbjct	61	.....	.....	.....	.....	.....	.....	.....	120
Query	364	SVWKDLLEDSE	TPITTIMAKNE	VFCVDPTKGG	KKAARLIVYP	DLGVRVCEK	MALYDITQ		543
Sbjct	121	.....	.....	.....	.....	.....	.....	.....	180
Query	544	KLPQAVMGAS	YGFQYSPAQR	VEFLKAWAE	KKDPMGFSY	DTRCFDSTV	TERDIRTE	ESIY	723
Sbjct	181	.....	.....	.....	.....	.....	.....	.....	240
Query	724	RACSLPEEAHT	AIHSLTERLYV	GGPMFNSKQTC	GYRRCRASG	VLTTS	MGNTITCY	Vka1	903
Sbjct	241	.....	.....	.....	.....	.....	.....	.....	300
Query	904	aackaagii	aPTMLVCGDDL	VVISESQGTE	EDERNLRAF	TEAMTRYSA	PPGDP	PPRPEYDL	1083
Sbjct	301	.....	.....	.....	.....	.....	.....	.....	360
Query	1084	ELITSCSSNVSV	ALGPQGRRRYYL	TRDPTTPIARA	AWETVRHSPVNS	WLGNI	IQYAP	TIW	1263
Sbjct	361	.....	.....	.....	.....	.....	.....	.....	420
Query	1264	ARMVLMTHFFS	SILMAQDTLDQ	NLFEMYGAVYS	VSPLDLP	PAIIERLHGLD	AFSLHTY	TPH	1443
Sbjct	421	.....	.....	.....	.....	.....	.....	.....	480

Query 1444 ELTRVASALRKLGAAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPLP 1623
 Sbjct 481 540

Query 1624 EARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
 Sbjct 541 570

>sp|P26660|POLG_HCVJ6 Genome polyprotein [Contains: Core protein p21 (Capsid protein C) (p21); Core protein p19; Envelope glycoprotein E1 (gp32) (gp35); Envelope glycoprotein E2 (NS1) (gp68) (gp70); p7; Protease NS2-3 (p23); Serine protease/NTase/helicase NS3 (Hepacivirin) (NS3P) (p70); Non-structural protein 4A (NS4A) (p8); Non-structural protein 4B (NS4B) (p27); Non-structural protein 5A (NS5A) (p56); RNA-directed RNA polymerase (NS5B) (p68)]
 dbj|BAA00792.1| polyprotein [Hepatitis C virus]
 Length=3033

Score = 1113 bits (2878), Expect = 0.0
 Identities = 562/570 (98%), Positives = 569/570 (99%), Gaps = 0/570 (0%)
 Frame = +1

Query 4 SMSYTWGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL 183
 Sbjct 2443S.....S.....A. 2502

Query 184 DSYDVSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK 363
 Sbjct 2503 .AH.....L..... 2562

Query 364 SVWKDLLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ 543
 Sbjct 2563TQ..... 2622

Query 544 KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESY 723
 Sbjct 2623 2682

Query 724 RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka 903
 Sbjct 2683 2742

Query 904 aackaagiiPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPGDPPRPEYDL 1083
 Sbjct 2743 2802

Query 1084 ELITSCSSNVSVLGPQGRRRYYLTRDPTTPIARAWEVTVRHSPVNSWLGNIQYAPTIW 1263
 Sbjct 2803 2862

Query 1264 ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPDLPAIIERLHGLDAFSLHTYTPH 1443
 Sbjct 2863 2922

Query 1444 ELTRVASALRKLGAAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPLP 1623
 Sbjct 2923 2982

Query 1624 EARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
 Sbjct 2983 3012

>gb|AA24374.1| polyprotein [Hepatitis C virus]
 Length=586

Score = 1110 bits (2870), Expect = 0.0
 Identities = 563/565 (99%), Positives = 564/565 (99%), Gaps = 0/565 (0%)
 Frame = +1

Query 19 WTGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVLDSYD 198
 Sbjct 1H..... 60

Query 199 SVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHKSVWKD 378
 Sbjct 61 120

Query 379 LLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQKLPQA 558
 Sbjct 121G..... 180

Query 559 VMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESIYRACSL 738
 Sbjct 181 240

Query 739 PEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVkalaacka 918
 Sbjct 241 300

Query 919 agiiaPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPGDPPRPEYDLELITS 1098
 Sbjct 301 360

Query 1099 CSSNVSVLGPQGRRRYYLTRDPTTPIARAWEVTVRHSPVNSWLGNIQYAPTIWARMVL 1278
 Sbjct 361 420

```
Query 1279 MTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLPATIERLHGLDAFSLHTYTPHELTRV 1458
Sbjct 421 ..... 480

Query 1459 ASALRKLGAAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPPEARLL 1638
Sbjct 481 ..... 540

Query 1639 DLSSWFTVGAGGGDIYHSVSRARPR 1713
Sbjct 541 ..... 565
```

>dbj|BAB32874.1| polyprotein [Hepatitis C virus]
Length=3033

Score = 1108 bits (2867), Expect = 0.0
Identities = 557/570 (97%), Positives = 568/570 (99%), Gaps = 0/570 (0%)
Frame = +1

```
Query 4 SMSYTWTGALITPCSPREEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL 183
Sbjct 2443 ....S.....S..... 2502

Query 184 DSYDYSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK 363
Sbjct 2503 .A.....K...L..... 2562

Query 364 SVWKDLLEDSETPIPTTIAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ 543
Sbjct 2563 .....Q.....V.. 2622

Query 544 KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESY 723
Sbjct 2623 .....T..... 2682

Query 724 RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka1 903
Sbjct 2683 .....S.....A... 2742

Query 904 aackaagiiaPTMLVCDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPDPPRPEYDL 1083
Sbjct 2743 .....V..... 2802

Query 1084 ELITSCSSNVSVLGPQGRRRYYLTRDPTTPIARAAWETVRHSPVNSWLGNIQYAPTIW 1263
Sbjct 2803 .....A..... 2862

Query 1264 ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLPATIERLHGLDAFSLHTYTPH 1443
Sbjct 2863 .....S... 2922

Query 1444 ELTRVASALRKLGAAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPLP 1623
Sbjct 2923 ..... 2982

Query 1624 EARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
Sbjct 2983 ..... 3012
```

>pdb|1YUY|A **S** Chain A, Hepatitis C Virus Ns5b Rna-Dependent Rna Polymerase
Genotype 2a
pdb|1YV2|A **S** Chain A, Hepatitis C Virus Ns5b Rna-Dependent Rna Polymerase
Genotype 2a
pdb|1YVX|A **S** Chain A, Hepatitis C Virus Rna Polymerase Genotype 2a In Complex
With Non- Nucleoside Analogue Inhibitor
pdb|1YVZ|A **S** Chain A, Hepatitis C Virus Rna Polymerase Genotype 2a In Complex
With Non- Nucleoside Analogue Inhibitor
Length=570

Score = 1107 bits (2862), Expect = 0.0
Identities = 557/570 (97%), Positives = 568/570 (99%), Gaps = 0/570 (0%)
Frame = +1

```
Query 4 SMSYTWTGALITPCSPREEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL 183
Sbjct 1 ....S.....S..... 60

Query 184 DSYDYSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK 363
Sbjct 61 .A.....S.....L..... 120

Query 364 SVWKDLLEDSETPIPTTIAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ 543
Sbjct 121 .....Q.....V.. 180

Query 544 KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESY 723
Sbjct 181 ..... 240

Query 724 RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka1 903
Sbjct 241 Q.....R.....S..... 300
```

Query	904	aackaagiaaPTMLVCGDDLVI	1083
Sbjct	301	.....V.....	360
Query	1084	ELITSCSSNV	1263
Sbjct	361	.....	420
Query	1264	ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLP	1443
Sbjct	421	V.....S.....	480
Query	1444	ELTRVASALRKL	1623
Sbjct	481	.....	540
Query	1624	EARLLDLSSWFTVGAGGGDIYHSVSRARPR	1713
Sbjct	541	.....	570

>gb|AA59943.1|AF238484_1 polyprotein [Hepatitis C virus subtype 2a]
Length=3033

Score = 1102 bits (2849), Expect = 0.0
Identities = 553/570 (97%), Positives = 567/570 (99%), Gaps = 0/570 (0%)
Frame = +1

Query	4	SMSYTW	183
Sbjct	2443	....S.....S.....T...	2502
Query	184	DSYYDSVLKDIKLAASKVTARLLTME	363
Sbjct	2503	.AH.....N.....V.....	2562
Query	364	SVWKDLEDSETPIPTT	543
Sbjct	2563	.....Q.....V..	2622
Query	544	KLPQAVMGASYGFOYSPAQRVEFL	723
Sbjct	2623	.....D.....R.....	2682
Query	724	RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYV	903
Sbjct	2683	Q.....R.....	2742
Query	904	aackaagiaaPTMLVCGDDLVI	1083
Sbjct	2743	.....V.....I.....	2802
Query	1084	ELITSCSSNV	1263
Sbjct	2803	.....V.	2862
Query	1264	ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLP	1443
Sbjct	2863	.....S.....	2922
Query	1444	ELTRVASALRKL	1623
Sbjct	2923	.....	2982
Query	1624	EARLLDLSSWFTVGAGGGDIYHSVSRARPR	1713
Sbjct	2983	.....	3012

>gb|AA25613.1|AF169005_1 polyprotein [Hepatitis C virus subtype 2a]
Length=3033

Score = 1100 bits (2844), Expect = 0.0
Identities = 551/570 (96%), Positives = 565/570 (99%), Gaps = 0/570 (0%)
Frame = +1

Query	4	SMSYTW	183
Sbjct	2443	....S.....S.....	2502
Query	184	DSYYDSVLKDIKLAASKVTARLLTME	363
Sbjct	2503	.AH.....S.....L.....	2562
Query	364	SVWKDLEDSETPIPTT	543
Sbjct	2563	.....Q.....A.....V..	2622
Query	544	KLPQAVMGASYGFOYSPAQRVEFL	723
Sbjct	2623	.....	2682
Query	724	RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYV	903
Sbjct	2683	.....L.....I...	2742
Query	904	aackaagiaaPTMLVCGDDLVI	1083
Sbjct	2743	.....V.....	2802
Query	1084	ELITSCSSNV	1263
Sbjct	2803	.....X.....LS.....	2862

Query	1264	ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLP	1443
Sbjct	2863	V.....X.....S..	2922
Query	1444	ELTRVASALRKLGAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWA	1623
Sbjct	2923	.....I.....	2982
Query	1624	EARLLDLSSWFTVGAGGGDIYHSVSRARPR	1713
Sbjct	2983	.....3012	3012

>gb|AAF59942.1|AF238483_1 polyprotein [Hepatitis C virus subtype 2a]
Length=3033

Score = 1100 bits (2844), Expect = 0.0
Identities = 554/570 (97%), Positives = 566/570 (99%), Gaps = 0/570 (0%)
Frame = +1

Query	4	SMSYTWGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL	183
Sbjct	2443	....S.....S.....	2502
Query	184	DSYYDSVLKDIKLAASKVTARLLTMEECQLTPPHSARSKYGFGAKEVRSLSGRAVNHK	363
Sbjct	2503	.AH.....S.....L.....	2562
Query	364	SVWKDLLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ	543
Sbjct	2563	.....Q.....	2622
Query	544	KLPQAVMGASYGFQYSPAQRVEFLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESIY	723
Sbjct	2623	.....L.....	2682
Query	724	RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka1	903
Sbjct	2683	.....L.....S.....	2742
Query	904	aackaagiiPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPDPPRPEYDL	1083
Sbjct	2743	.....V.....	2802
Query	1084	ELITSCSSNVSVLGPQGRRRYYLTRDPTTPIARAAWETVRHSPVNSWLGNIQYAPTIW	1263
Sbjct	2803	.....N.L.....	2862
Query	1264	ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLP	1443
Sbjct	2863	.....S.....S..	2922
Query	1444	ELTRVASALRKLGAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWA	1623
Sbjct	2923	.....T.....	2982
Query	1624	EARLLDLSSWFTVGAGGGDIYHSVSRARPR	1713
Sbjct	2983	.....3012	3012

>dbj|BAB32877.1| polyprotein [Hepatitis C virus]
Length=3033

Score = 1100 bits (2844), Expect = 0.0
Identities = 551/569 (96%), Positives = 566/569 (99%), Gaps = 0/569 (0%)
Frame = +1

Query	7	MSYTWGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVLD	186
Sbjct	2444	...S.....S.....	2503
Query	187	SYYDSVLKDIKLAASKVTARLLTMEECQLTPPHSARSKYGFGAKEVRSLSGRAVNHKS	366
Sbjct	2504	A.....S.....L.....	2563
Query	367	VWKDLLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQK	546
Sbjct	2564	.....Q.....V...	2623
Query	547	LPQAVMGASYGFQYSPAQRVEFLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESIYR	726
Sbjct	2624	.....D.RE.....Q	2683
Query	727	ACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVkala	906
Sbjct	2684	.....L.....A.....	2743
Query	907	ackaagiiPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPDPPRPEYDLE	1086
Sbjct	2744	.....V.....	2803
Query	1087	LITSCSSNVSVLGPQGRRRYYLTRDPTTPIARAAWETVRHSPVNSWLGNIQYAPTIWA	1266
Sbjct	2804	.....V	2863
Query	1267	RMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLP	1446
Sbjct	2864	.....S.....S...	2923
Query	1447	LTRVASALRKLGAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWA	1626

Sbjct 2924I..... 2983
Query 1627 ARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
Sbjct 2984 3012

>gb|AAF59940.1|AF238481_1 polyprotein [Hepatitis C virus subtype 2a]
Length=3033

Score = 1098 bits (2840), Expect = 0.0
Identities = 553/570 (97%), Positives = 563/570 (98%), Gaps = 0/570 (0%)
Frame = +1

Query 4 SMSYTWGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL 183
Sbjct 2443S.....A..... 2502
Query 184 DSYYDSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK 363
Sbjct 2503 .AH.H.....S.....L..... 2562
Query 364 SVWKDLLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ 543
Sbjct 2563Q.....V.. 2622
Query 544 KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESY 723
Sbjct 2623 2682
Query 724 RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka1 903
Sbjct 2683 L.....R..... 2742
Query 904 aackaagiaaPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPGDPPRPEYDL 1083
Sbjct 2743V..... 2802
Query 1084 ELITSCSSNVSVALGPQGRRRYYLTRDPTTPIARAAWETVRHSPVNSWLGNI IQYAPTIW 1263
Sbjct 2803 2862
Query 1264 ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLPATIERLHGLDAFSLHTYTPH 1443
Sbjct 2863 V.....S..... 2922
Query 1444 ELTRVASALRKLGAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPLP 1623
Sbjct 2923T.....H.....I..... 2982
Query 1624 EARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
Sbjct 2983 3012

>dbj|BAB32873.1| polyprotein [Hepatitis C virus]
Length=3033

Score = 1095 bits (2833), Expect = 0.0
Identities = 553/570 (97%), Positives = 564/570 (98%), Gaps = 0/570 (0%)
Frame = +1

Query 4 SMSYTWGALITPCSPEEEKLPINPLSNSLLRYHNKVYCTTTKSASLRAKKVTFDRMQVL 183
Sbjct 2443S.....S.....S..... 2502
Query 184 DSYYDSVLKDIKLAASKVTARLLTMEACQLTPPHSARSKYGFGAKEVRSLSGRAVNHK 363
Sbjct 2503 .A.....S.....L..... 2562
Query 364 SVWKDLLEDSETPIPTTIMAKNEVFCVDPTKGGKKAARLIVYPDLGVRVCEKMALYDITQ 543
Sbjct 2563Q.....A.....P.....V.. 2622
Query 544 KLPQAVMGASYGFQYSPAQRVEFLLKAWAEKKDPMGFSYDTRCFDSTVTERDIRTEESY 723
Sbjct 2623R..... 2682
Query 724 RACSLPEEAHTAIHSLTERLYVGGPMFNSKGQTCGYRRCRASGVLTTSMGNTITCYVka1 903
Sbjct 2683 Q.....R.....S..... 2742
Query 904 aackaagiaaPTMLVCGDDLVISESQGTEEDERNLRAFTEAMTRYSAAPPGDPPRPEYDL 1083
Sbjct 2743 2802
Query 1084 ELITSCSSNVSVALGPQGRRRYYLTRDPTTPIARAAWETVRHSPVNSWLGNI IQYAPTIW 1263
Sbjct 2803S..... 2862
Query 1264 ARMVLMTHFFSILMAQDTLDQNLNFEMYGAVYSVSPLDLPATIERLHGLDAFSLHTYTPH 1443
Sbjct 2863 V.....S..... 2922
Query 1444 ELTRVASALRKLGAPPLRAWKSRARAVRASLISRGGRAAVCGRYLFNWAVKTKLKLTPLP 1623
Sbjct 2923 2982
Query 1624 EARLLDLSSWFTVGAGGGDIYHSVSRARPR 1713
Sbjct 2983 3012